

likely that the plant still occurs in suitable brush habitat. This species is threatened by brush clearing, livestock grazing, and increased urbanization and recreation.

DATES: Comments from all interested parties must be received by November 30, 1990. Public hearing requests must be received by November 15, 1990.

ADDRESSES: Comments and material concerning this proposal should be sent to the Field Supervisor, U.S. Fish and Wildlife Service, Ecological Services Field Office, c/o Corpus Christi State University, Campus Box 338, 6300 Ocean Dr., Corpus Christi, Texas 78412. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Philip Clayton (see **ADDRESSES**) at (512) 888-3346 or FTS 529-3346.

SUPPLEMENTARY INFORMATION:

Background

Manihot walkerae (Walker's manioc) is a perennial herb that presently is known from only one site in the U.S. The species was first collected by Schott in 1853 at Ringgold Barracks, Starr County, Texas, but this was misidentified as *Manihot carthagenensis*, a species of tropical America (Turner 1982). Subsequent collections were made in 1888, 1940, and 1960. The type material was collected by E.J. Walker in 1940 and transmitted to H.B. Parks for identification; he in turn transmitted it to V.L. Cory. Cory sent the material for identification to Croizat, who recognized it as a new species. The species was described in 1942. Rogers and Appan (1973), in their monograph of *Manihot* (*Manihotoides*) for the Flora Neotropica, retained the species as *Manihot walkerae*.

This member of the family Euphorbiaceae is a profusely branched perennial herb that grows to 0.5 meters (1.6 feet). The stems are slender and the alternate leaves are palmately deeply 5-lobed with the middle lobe being 2-5 centimeters (0.8-2.0 inches) long. The flowers are white, somewhat fleshy, 5-10 millimeters (0.2-0.4 inches) long, and are either male or female. The fruit is a three-parted globular capsule about 1 centimeter (0.4 inches) in diameter. Each fruit produces three seeds.

Walker's manioc has been found at 100-200 meters (328-656 feet) elevation among thorny shrubs along the Rio Grande in south Texas, presumably in relatively deep, loamy soils, and at 41 meters (135 feet) elevation, northeast of the Rio Grande on the periphery of dense native brush in sandy-loam soil. It

has also been found growing up through protective thorn shrubs on sandy prairie overlying caliche in Tamaulipas, Mexico. The species occurs in Tamaulipan brushland dominated by *Acacia* (*acacia*), *Prosopis glandulosa* (mesquite), *Pithecellobium flexicaule* (Texas ebony), and *Leucophyllum frutescens* (cenizo). The exact habitat preferences of Walker's manioc are unknown.

One natural population of Walker's manioc is known in the U.S. at present. The species is historically known from the Rio Grande Plains of southern Texas and northeastern Mexico. Plants have been collected in Starr and Hidalgo Counties, Texas, and in the State of Tamaulipas, Mexico. Collections from natural habitat have been made from only seven localities. The northeastern Tamaulipas populations may still exist, but their presence has not been verified. Turner (1982) made several attempts over a 5-year period to locate the species in the vicinity of previously known sites and elsewhere in Texas, but failed to locate plants. Lonard (*in litt.*) did not find *Manihot walkerae* during searches in wooded sites along the Rio Grande in Texas. Clayton (*in litt.*) located the species in 1990 at a perviously unrecorded site in Hidalgo County, Texas.

Plants are being cultivated at the University of Texas, Austin, and the San Antonio Botanical Gardens in Texas. Brush clearing for cultivation, range improvement, and urban and recreational development has destroyed much of the suitable habitat for *Manihot walkerae*. However, the collector of the type specimen believes that *M. walkerae* still occurs in brush habitats. Turner (1982) believes that natural populations still occur along the Rio Grande in areas of previous collections, and Lonard (*in litt.*) suggested an additional area to survey in Texas.

Manihot walkerae is related to the important crop plant, *Manihot esculenta* (cassava). It may be possible to interbreed *M. walkerae* and *M. esculenta* and thus provide a valuable gene pool for the improvement of cassava. Loss of *M. walkerae* could have considerable impacts to humans, judging by the potential it might hold for food and drug purposes (Turner 1982; Clayton, pers. comm.). *M. walkerae* may contain genes that provide salt or drought tolerance, or disease resistance, to the plant. These properties would be beneficial for cassava.

Section 12 of the Endangered Species Act of 1973 (16 U.S.C. 1513 *et seq.*) directed the Secretary of the Smithsonian Institution to prepare a

50 CFR Part 17

RIN 1018-AB38

Endangered and Threatened Wildlife and Plants; Proposed Rule to List the Plant *Manihot walkerae* (Walker's manioc) as Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service) proposes to list *Manihot walkerae* as an endangered species, under the authority contained in the Endangered Species Act of 1973 (Act), as amended. Walker's manioc is endemic to Tamaulipan brushland in the Lower Rio Grande Valley of south Texas and northeast Mexico. At present, one population is known from Texas. There are no recently verified populations in Mexico, although plants were collected there in the past. It is

report of those plants considered to be endangered, threatened, or extinct. This report, designated as House Document No. 94-51, was presented to Congress on January 9, 1975. On July 1, 1975, the Service published a notice in the *Federal Register* (40 FR 27823) of its acceptance of the report of the Smithsonian Institution as a petition within the context of section 4 of the Act and of its intention to review the status of the plant taxa named within. On June 16, 1976, the Service published a proposed rule in the *Federal Register* (41 FR 24523) to determine approximately 1,700 vascular plant species to be endangered species pursuant to section 4 of the Act.

This list of 1,700 plant taxa was assembled on the basis of comments and data received by the Smithsonian Institution and the Service in response to House Document No. 94-51 and the July 1, 1975, *Federal Register* publication. *Manihot walkerae* was included in the July 1, 1975, notice of review and in the June 16, 1976, proposal.

The Endangered Species Act Amendments of 1978 required that all proposals over 2 years old be withdrawn. A 1-year grace period was given to those proposals already more than 2 years old. Subsequently, on December 10, 1979 (44 FR 70796), the Service published a notice of the withdrawal of the portion of the June 16, 1976, proposal that had not been made final, along with other proposals that had expired; this notice of withdrawal included *Manihot walkerae*.

On December 15, 1980 (45 FR 82480), September 27, 1985 (50 FR 39526), and February 21, 1990 (55 FR 6184), the Service published updated notices reviewing the native plants being considered for classification as threatened or endangered. *Manihot walkerae* was included in these notices as a category 1 species. Category 1 comprises taxa for which the Service has sufficient biological data to support proposing them as endangered or threatened.

Section 4(b)(3)(B) of the Endangered Species Act, as amended in 1982, requires the Secretary to make findings on certain pending petitions within 1 year of their receipt. Section 2(b)(1) of the Act's Amendments of 1982 further requires that all petitions pending on October 12, 1982, be treated as having been newly submitted on that date. Because *Manihot walkerae* was included in the 1980 notice, the petition to list this species was treated as being newly submitted on October 12, 1982. In 1983, 1984, 1985, 1986, 1987, 1988, and 1989, the Service made the required 1-year findings that listing of *Manihot*

walkerae was warranted, but precluded by other listing actions of higher priority. Biological data, supplied by Turner (1982), fully support the listing of *Manihot walkerae*. This proposed rule constitutes the final 1-year finding required by section 4(b)(3)(B) of the Act for this species.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Manihot walkerae* Croizat (Walker's manioc) are as follows:

A. The present or threatened destruction, modification, or curtailment of its habitat or range. *Manihot walkerae* is endemic to Tamaulipan brushland, a unique ecosystem found only in south Texas and northeastern Mexico. Since the early 1800's, 95 percent of native Tamaulipan brushland has been cleared for agriculture, urban development, and recreation. In riparian areas, 99 percent of native brush has been destroyed. It is estimated that 98 percent of the lush, subtropical region of the Rio Grande delta has been cleared in the United States (USFWS 1980), and a large percentage of similar habitat has been cleared in Mexico (Collins 1984). Water development on the Rio Grande has substantially reduced river flow, resulting in altered riparian habitats and additional brush clearing. Brush is destroyed in the Lower Rio Grande Valley by mechanical clearing, herbicides, and fire (Jahrsdoerfer and Leslie 1988).

Manihot walkerae is near extinction because of extensive conversion of Tamaulipan brushland to cropland and improved pasture in the Rio Grande plains of southwestern Texas and adjoining Mexico. Land that remains in native vegetation is used for cattle production and is often severely overgrazed. Attempts to locate previously known sites for *Manihot walkerae* in Texas have been unsuccessful (Leonard, *in litt.*; Turner 1982). One new *Manihot walkerae* site was discovered recently (Clayton, *in litt.*). Any existing Mexican populations are under severe threat because the region is heavily grazed and cultivated. (Turner, *in litt.*).

B. Overutilization for commercial, recreational, scientific, or educational purposes. None known. Because of its rarity, *Manihot walkerae* is of interest to botanists, plant breeders, and drug companies. *M. walkerae* may contain genes that provide resistance to salt, drought, or disease. The species may also contain biodynamic compounds that could be useful for disease treatment. Therefore, collection is a minor but present threat.

C. Disease or predation. While cattle grazing or trampling may not kill mature plants with an established root system, these actions may kill seedlings and affect the reproduction of mature plants, thereby reducing recruitment rates in the population.

D. The inadequacy of existing regulatory mechanisms. *Manihot walkerae* is not currently protected by either Federal or State law in the U.S. and Mexico. The Act would provide protection and encourage active management through the "Available Conservation Measures" described below.

E. Other natural or manmade factors affecting its continued existence. Scarcity and limited distribution make this species vulnerable to both natural and human threats. Any further reduction in plant numbers could reduce the reproductive capabilities and genetic potential of the species.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to propose this rule. Based on this evaluation, the preferred action is to list *Manihot walkerae* as endangered without critical habitat. This status is appropriate because the previously known populations in the U.S. have been eliminated and only one site is known at present. The previously known population site in Mexico is in an area of heavy grazing and cultivation. The reasons for not designating critical habitat are discussed below.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that, to the maximum extent prudent and determinable, the Secretary propose critical habitat at the time the species is proposed to be endangered or threatened. The Service finds that designation of critical habitat is not presently prudent for this species. There is only one known population of *Manihot walkerae* at present. Loss of even a few plants to activities such as collection for scientific purposes could extirpate the species. Publication of

critical habitat descriptions and maps would increase the vulnerability of the species without significantly increasing protection. In addition, the Service does not have authority to designate critical habitat in areas outside the jurisdiction of the United States. As discussed under factor B in the Summary of Factors Affecting the Species, *Manihot walkerae* is threatened by taking, an activity difficult to enforce against and only regulated by the Act with respect to plants in cases of: (1) Removal and reduction to possession of listed plants from lands under Federal jurisdiction, or their malicious damage or destruction on such lands; and (2) removal, cutting, digging up, or damaging or destroying in knowing violation of any State law or regulation, including State criminal trespass law. Such provisions are difficult to enforce, and publication of a critical habitat description and map would make *Manihot walkerae* more vulnerable and increase enforcement problems. Protection of this species' habitat will be addressed through the recovery process and through the section 7 jeopardy standard. Therefore, it would not now be prudent to determine critical habitat for *Manihot walkerae*.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. The protection required of Federal agencies and the prohibitions against certain activities involving listed plants are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) requires Federal agencies to confer informally with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is listed

subsequently, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. There are no known populations of *Manihot walkerae* that either occur on Federal land and/or would be affected by activities authorized, funded, or carried out by a Federal agency. However, the International Boundary and Water Commission clears brush to maintain canals on the U.S. side of the Rio Grande. The Corps of Engineers authorizes pipeline construction projects in the area. If it is determined that such activities could have an effect on *Manihot walkerae*, section 7 consultation would have to be initiated. The plant likely occurs on Federal refuge lands in south Texas.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general trade prohibitions and exceptions that apply to all endangered plants. All trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, sell or offer for sale this species in interstate or foreign commerce, or to remove and reduce to possession the species from areas under Federal jurisdiction. In addition, for endangered plants, the 1988 amendments (Pub. L. 100-478) to the Act prohibit the malicious damage or destruction on Federal lands and the removal, cutting, digging up, or damaging or destroying of endangered plants in knowing violation of any State law or regulation, including State criminal trespass law. Certain exceptions apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered species under certain circumstances.

It is anticipated that few trade permits would ever be sought or issued because the species is not common in cultivation or in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Office of Management Authority, U.S.

Fish and Wildlife Service, P.O. Box 3507, Arlington, VA 22201 (703/358-2104).

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to this species;

(2) The location of any additional populations of this species and the reasons why any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act;

(3) Additional information concerning the range, distribution, and population size of this species; and

(4) Current or planned activities in the subject area and their possible impacts on this species.

Final promulgation of the regulation on this species will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be received within 45 days of the date of publication of the proposal. Such requests must be made in writing and addressed to the Field Supervisor, Ecological Services Field Office, Corpus Christi, TX (see ADDRESSES).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the Federal Register on October 25, 1983 (48 FR 49244).

References Cited

Collins, K. 1984. Status and management of native south Texas brushlands. U.S. Fish and Wildlife Service, Ecological Services, Corpus Christi, TX. 16 pp.

Jahrsdoerfer, S.E. and D.M. Leslie, Jr. 1968. Tamaulipan brushland of the Lower Rio Grande Valley of south Texas: description, human impacts, and management options. U.S. Fish and Wildlife Service, Biological Report 88(36). 63 pp.

Rogers, D.J. and S.G. Appan. 1973. *Manihot*, *Manihotoides* (Euphorbiaceae). Flora Neotropica, Monograph No. 13, pp. 63-65. Hafner Press, New York.

Turner, B.L. 1982. Status report, *Manihot walkerae* Croizat. U.S. Fish and Wildlife Service, Albuquerque, NM. 9 pp.

U.S. Fish and Wildlife Service. 1980. Department of the Interior Habitat Preservation Plan—preservation of areas of important fish and wildlife habitat: Cameron, Hidalgo, Starr, and Willacy Counties, Texas. Albuquerque, NM. 92 pp.

Author

The primary author of this proposed rule is Sonja Jahrsdoerfer, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, NM 87103 (505/766-3972 or FTS 474-3972).

List of Subject in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and record-keeping requirements, and Transportation.

Proposed Regulation Promulgation

PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend part 17, subchapter B of chapter

I, title 50 of the Code of Federal Regulations, as set forth below:

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1407; 15 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500; unless otherwise noted.

2. It is proposed to amend § 17.12(h) by adding the following, in alphabetical order under the family Euphorbiaceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

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(h) • • •

Species		His- toric range	Status	When listed	Critic- al habitat	Special rules
Scientific name	Common name					
Euphorbiaceae—Euphorb family:						
<i>Manihot walkerae</i>	Walker's manioc	U.S.A. (TX), Mexico.	E		NA	NA

Dated: September 21, 1990.

Richard N. Smith,

Acting Director, Fish and Wildlife Service.

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